



# Driving Your EV Charging Project

—chargepoint®

# The World's Largest and Most Open EV Charging Network



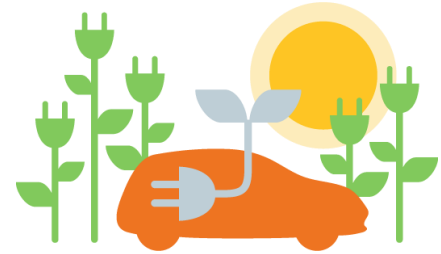
## Largest Community of EV drivers

- + 80% of new EV drivers join ChargePoint network every month
- + A driver plugs into our network every 2 seconds



## Charging Everywhere

- + 55,000+ charging spots in US alone
- + 800+ ports added every month



## We're Established and Growing

- + Almost \$300 million in funding
- + 74%+ share of commercial smart charging marketshare

**We Are the Industry Leader**

According to Time, Bloomberg, CNBC, Navigant Research

# Design and Planning Considerations

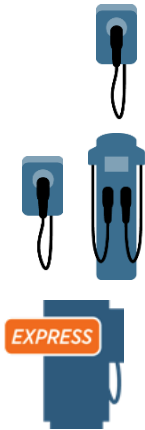
- + 1) Choose the Right Hardware/Software/Vendor
  - Charging Speeds & Station Types
    - Value of a Network
    - Ongoing Maintenance/Repairs
- + 2) Site Assessment for Install Costs
  - Installation Options
  - Site Considerations
- + 3) Future Expansion
  - Laying Conduit
  - Power Management



# Charging Speeds & Station Types

## EV Charging Options

	Amperage	Voltage	Kilowatts	Typical Charging Time	Connector	Primary Use
<b>AC Level 1</b>	12–16 amps	120 V	1.3–1.9 kW	12–60 hours 2–5 miles RPH	J1772 connector	<ul style="list-style-type: none"> <li>• Backup charge</li> <li>• Some Home use</li> </ul>
<b>AC Level 2</b>	6–80 amps	208 V or 240 V	Up to 19.2 kW	2–4 hours 10–30 miles RPH	J1772 connector	<ul style="list-style-type: none"> <li>• Park and charge</li> <li>• Residential, commercial and public charging</li> </ul>
<b>DC Fast Charge</b>	70–125 amps	208 V or 480 V	24–150+ kW	15–45 minutes 100–250 miles RPH	SAE Combo, Tesla, ChaDeMo connector	<ul style="list-style-type: none"> <li>• Commercial, public</li> <li>• Charging while traveling long distances (en-route)</li> </ul>



# Commercial Level 2 Charging Stations

- + **Speed:** Provides 20-25 RPH (miles of Range Per Hour).
- + **Clean Cord Technology:** Self-retracting, maintenance free, ultra-lightweight cord management system.
- + **Power Management Options:** Cut installation costs and double the number of parking spots served.
- + **Branding and Customization:** Promote your brand with an LCD screen and customizable signage.
- + **3G “Smart” Connectivity:** Allows for many driver experience enhancements as well as station owner flexibility controls.
- + **Consumer Friendly User Interface:** Available in multi languages (English, French, and Spanish), interactive animated user interface, and touch buttons for input (glove and ice operations).
- + **Compatibility:** 100% of EVs can charge with our Level 2 Chargers including Tesla



## Selecting the Right Level 2 Hardware



- + Dedicated fleet use
- + RFID can be disabled (behind fence)
- + Accepts only Fleet Accounts
- + Driver Accounts not accepted
- + Access control for individual fleets

CPF25



- + Shared with non-fleet users
- + Requires RFID
- + Fleet & Driver accounts accepted
- + Driver & Fleet access control

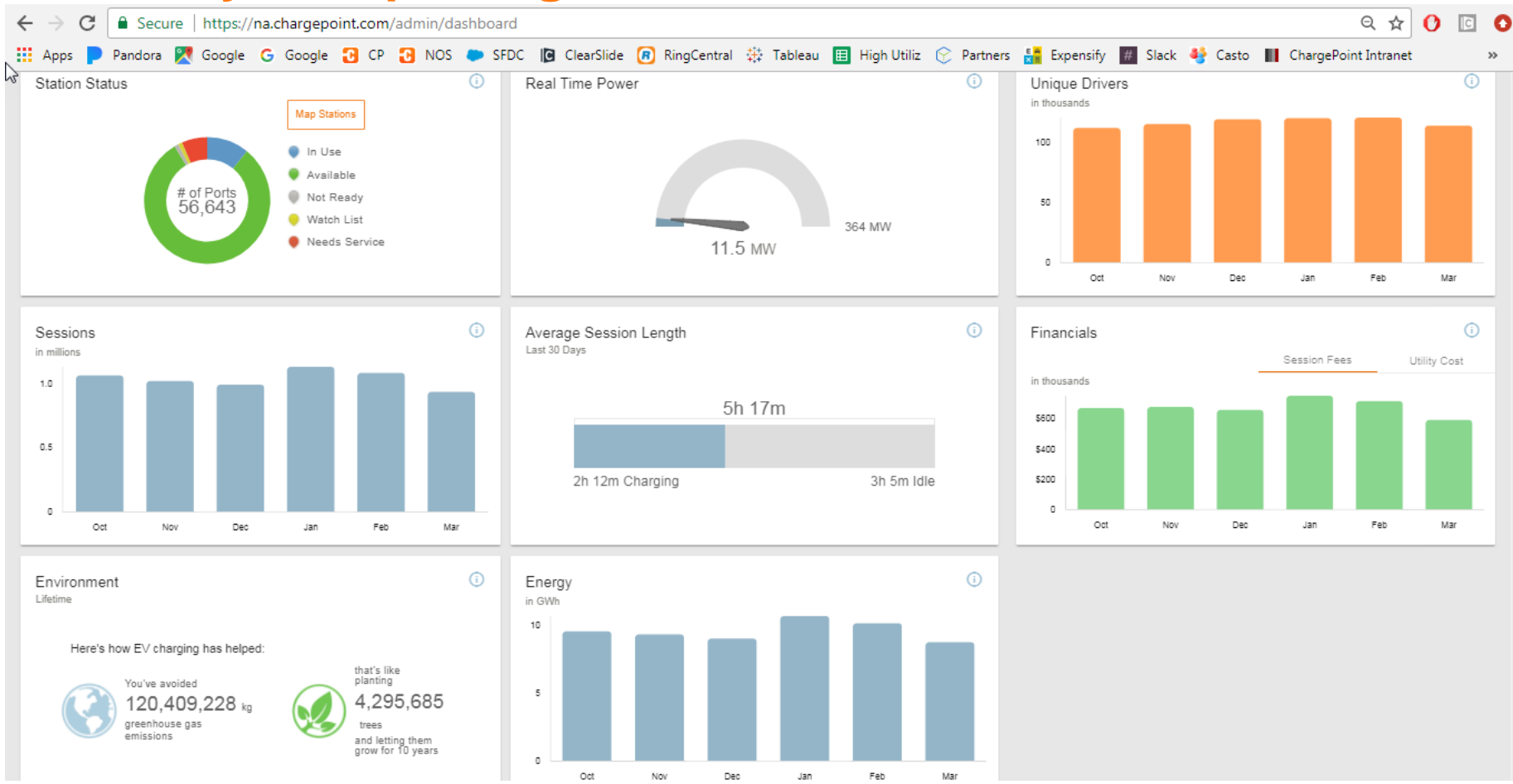
CT4000

# Value of “Smart” Networked Stations

Capability	Smart Charger	Dumb Charger
Dispense Electricity	✓	✓
Visible to Drivers * through mobile app, turn by turn directions, nearby amenities, real-time availability, 24/7/365 driver support	✓	✗
Ability to Charge \$ per Session * by kWh, time of use, or drivers	✓	✗
Access Control * public/private, loyalty rewards	✓	✗
Remote Access and Maintenance * proactive monitoring, rules/software updates, etc.	✓	✗
Data Analytics * station usage, # of unique drivers, charging behavior, utilization, revenue, and costs	✓	✗
Sustainability Reporting *GHG savings, fuel savings	✓	✗



# Visibility & Reporting: Dashboard





# Ongoing Maintenance: ChargePoint ‘Assure’ Coverage




Industry leading parts and on-site labor warranty that covers repair and/or replacement of defective stations included at no extra cost



## + Key Benefits:

- Proactive Monitoring... we view remotely to ensure proper functionality
  - ChargePoint often knows about a problem before the host and will contact the host for proactive repairs
  - Proactive support and reliability with virtually no administrative efforts or unexpected costs annually
- Includes all Parts and On-Site Labor to repair or replace product defects
  - One business day on-site response or one business day from parts delivery. ChargePoint assumes all triage and repair coordination responsibilities
  - Coverage in all 50 US states + Canada
- Monthly and quarterly reporting/analytics emailed to station owners
- 98% Annual Uptime Guarantee
- Can be purchased for up to 5 years, up-front or annual billing available

# Station Installation Options

-  **A** Use Your Preferred Electrician for the Entire Project (make-ready & installation)
  - We provide training @ [www.chargepointuniversity.com](http://www.chargepointuniversity.com)
-  **B** Use Your Preferred Electrician to Provide Make-Ready Work (picture on next slide)
  - We will send our electrician for final station hookup & provisioning
-  **C** Use ChargePoint's Preferred Electrician to Complete Entire Project
  - We will help coordinate & schedule a site assessment

## Examples of Make-Ready Sites

Wall Mount



Bollard Mount



# Site Assessment: Considerations

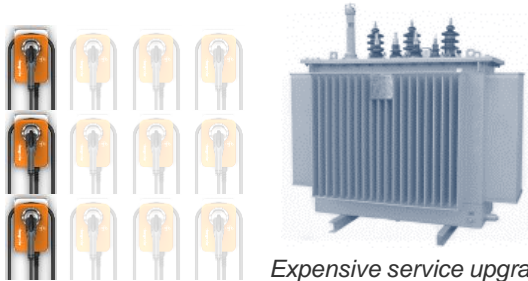
## + Aspects to Consider

- Proximity to power source
- Cell signal, 3G or LTE
- Potential trenching
- Lighting and security
- Visibility and signage
- Future Expansion
  - Extra Conduit for Future Stations
  - Power Management (more on next slide)

# Future Expansion Cost Considerations

## Without Panel Sharing

- + Each station requires a fully dedicated 40 amp circuit at all times, no matter how many vehicles plugged in
- + Expensive service upgrade required in order to accommodate more than a small handful of stations



*Expensive service upgrade*

## With Panel Sharing

- + Panel Share works by setting a cap on the aggregate power of all stations, or groups of stations
- + Vehicles draw full power when few are plugged in
- + Power is intelligently shared when many vehicles are plugged in
- + Capital Cost Savings: avoid service upgrades
- + Electricity Bill savings: demand charge avoidance



*Use Existing service*

**Let's continue the discussion. Questions?**

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